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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,224	09/17/2003	Shinji Miyamoto	3408.68347	3378

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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05/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/664,224	Applicant(s) MIYAMOTO ET AL.	
	Examiner JORGE L. ORTIZ CRIADO	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,10-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

With respect to the status of claims 5 and 14, are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 07/02/2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call et al. U.S. Patent No. 5, 72,365 in combination with Yoshikawa et al. U.S. Patent No. 5,163,063 and further in view of Masaki et al U.S. Patent No. 5,392,273.

Regarding claim 1, Call et al. discloses an optical storage apparatus (Fig. 1) for writing and reading a storage medium using a laser beam, comprising:

a light source (14) for emitting a laser beam onto said storage medium (10);

a servo control unit (inherently provided) for performing follow up control of said laser beam (13) onto said storage medium according to a reflected light from said storage medium (reflected and detected at #50);

an automatic power control (APC) detector (31,32, 33, 38) for monitoring the emission power of said light source; and

a control unit (20; 15) for calculating a drive instruction amount based on a detection output (in line 34) of said APC detector, and performs automatic power control of said light source according to said drive instruction amount (current amount instruction 22), so that the emission power on said storage medium is maintained to be a write power during said writing, and the emission power on said storage medium is maintained to be a read power during said reading (see col. 2, lines 15 to 51),

wherein said control unit (20) measures an inclination (S2) of a relationship between said drive instruction amount (current amount instruction 22) and the detection output of said APC detector (Figs. 2, 3), and

judges an abnormality on said APC detector end, particularly an abnormality in the light source, by comparing a pre-measured inclination (S1) (pre-measured because it is measured first) of the relationship between said drive instruction amount and the detection output of said APC detector with said measured inclination (see col. 3, line 39 to col. 4 line 21; Fig. 4, step 67; col. 5 lines 1-10), and wherein said control unit judges the abnormality by comparing a value obtained by dividing said measured inclination by said pre-measured inclination with the threshold value (Min) (see col. 3, line 39 to col. 4 line 21; Fig. 4, step 67).

Although Call et al. teaches detection of abnormality at the APC detector ends by the use of the APC detector in the process to judge whether the light source is abnormal by such comparison between inclinations, does not expressly disclose judging whether the APC detector is abnormal. In the assumption that the APC detector is normally operating, the judgment is made towards the light source as being abnormal. But if the APC detector is not normally operating or is abnormal it is a fact that the same inclination change in characteristics is obtained of the relationship between said drive instruction amount and the detection output of said APC detector and the fact it is evidenced by Yoshikawa et al.

Yoshikawa et al. discloses that for an optical storage apparatus (Fig. 1) for writing and reading a storage medium using a laser beam, an abnormality may occur not only in the light source but also and abnormality also occurs in the automatic power control (APC). Yoshikawa et al. describes that the signal of the relationship between said drive instruction amount and the detection output of said APC detector ("as labeled monitor signal") abruptly or gradually change when an abnormality is caused by failure or serious degradation of the light source (laser) or by failure or serious degradation of the automatic power control (APC), (see for example description made in regard with Fig. 3; relationship signal labeled "monitor signal" col. 7, lines 11-47). Hence, the inclination abruptly or gradually changes as well as taught by Yoshikawa et al.

It is clearly understood that not only an inclination change of the relationship between said drive instruction amount and the detection output of said APC detector would change and only describes an abnormality in the light source but also an abnormality in the APC detector as

well. Therefore, it would have been obvious to one ordinary skill in the art to use the comparison outlined above and to make judgment of whether the APC is abnormal, based on the change in relationship between said drive instruction amount and the detection output of said APC detector in order to avoid dangerous excessive emission of the laser beam that can be effectively prevented, which would be caused due to abnormal automatic power control when the abnormality is not due to the light source, as taught and suggested by Yoshikawa et al.

Furthermore, the claims also provide that the pre-measurement is measure before a shipment of the optical storage apparatus. Call et al. teaches that the pre-measurement should correspond to the value that characterizes it when the apparatus is new, so that when used as reference value in comparison with the measurement value a difference can be judge. However, Call et al. or the combination outlined above does not expressly shows that the pre-measurement is measured before shipment of the optical storage apparatus.

However, this is known in the art and is evidenced by Masaki et al. which discloses obtaining characteristics of the laser control circuits before a shipment of the apparatus and then the apparatus use those values as reverences values when performing judgment control for abnormalities detections (see col. 14 lines 19-28).

It would have been obvious to one of ordinarily skill in the art at the time of the invention to provide the pre-measurement before a shipment of the apparatus, so that the value corresponds to the value when the APC, laser, etc. parts are new, for example before shipment from the factory value measured, obtaining accurate judgment comparison between a later the

measurement after shipment or from the beginning of the operation and initial use of the apparatus, as taught by Masaki et al.

Regarding claim 2, Call et al. discloses wherein said control unit measures the detection output (34) of said APC detector when said light source is driven with said drive instruction amount (22), and measures the inclination (S2) of the relationship between said drive instruction amount and said detection output (see col. 2, line 52 to col. 3, line 33; Fig. 4).

Regarding claim 3, Call et al. discloses wherein said control unit measures the inclination of the relationship between said drive instruction amount and the detection output of said APC detector when loading of said storage medium (see col. 5, lines 11-42; when erasable and write-once mediums are loaded).

Method claims 10-12 are drawn to the method of using the corresponding apparatus claimed in claims 1-4. Therefore, methods claims 10-13 correspond to the method used in the apparatus claims 1-3 and are rejected for the same reasons of obviousness as used above.

Response to Arguments

Applicant's arguments filed 04/28/2008 have been fully considered but are moot in view of the new ground(s) of rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORGE L. ORTIZ CRIADO whose telephone number is (571)272-7624. The examiner can normally be reached on Mon.-Fri 10:00 am- 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge L Ortiz-Criado/
Patent Examiner, Art Unit 2627